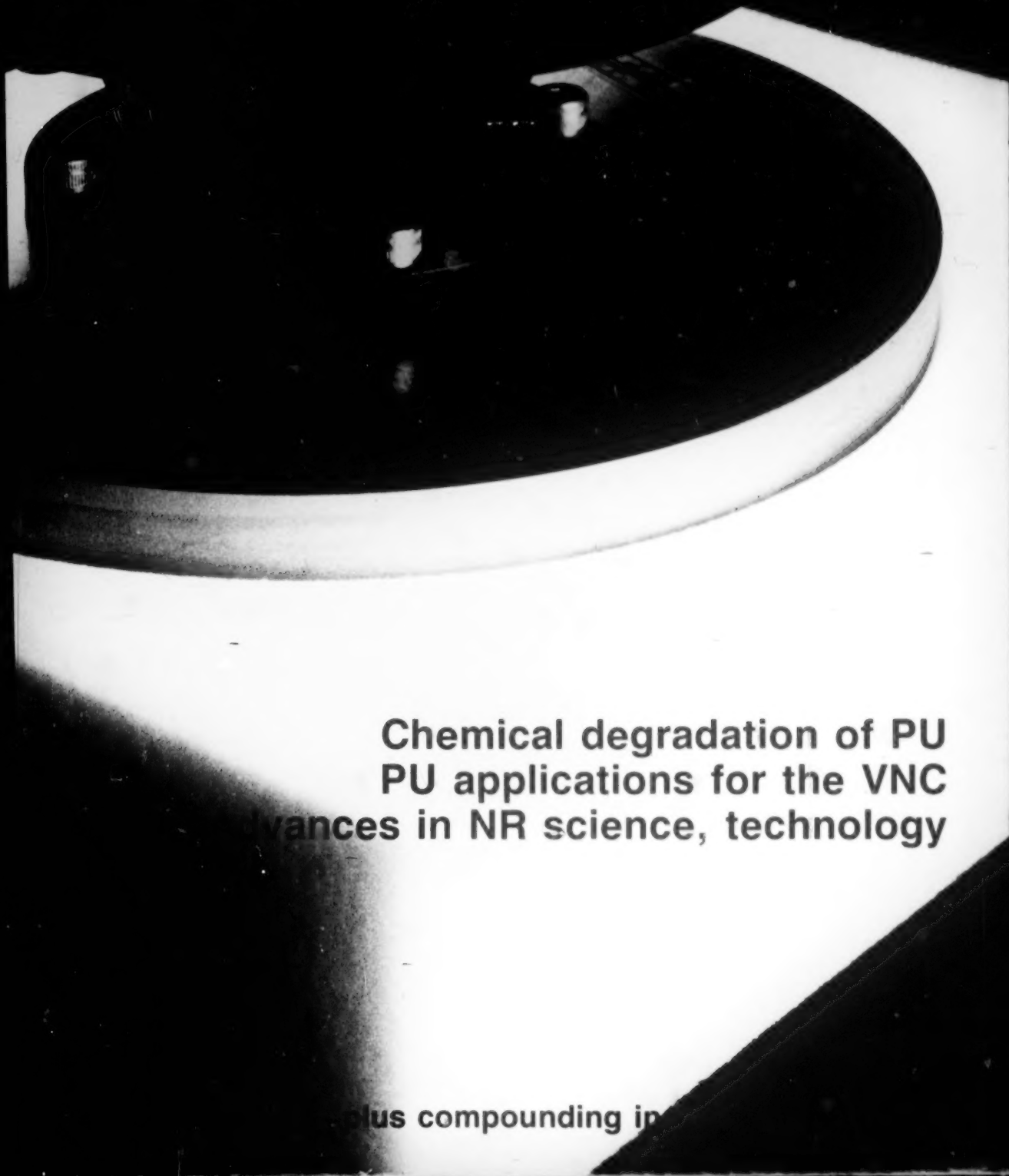


RubberWorld

The technical service magazine for the rubber industry

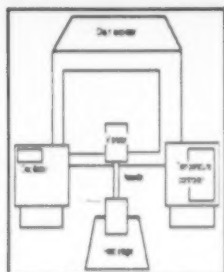
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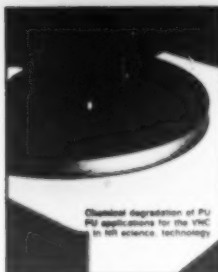


Chemical degradation of PU
PU applications for the VNC
Advances in NR science, technology

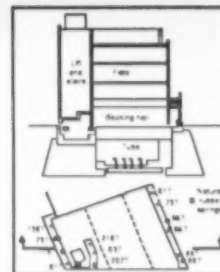
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Cover photo courtesy of ICI Polyurethanes.

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The
Audit
Bureau

Editorial

Let's hope the Rubber Manufacturers Association can work out a tire recycling bill with Congress that is fair and equitable. The domestic rubber industry hardly needs any more obstacles in attempting to produce quality, competitively priced goods in today's market. The Tire Recycling Incentives Act, presently working its way through Congress, needs some amending and rework and hopefully it will be done before it comes out of committee. The bill calls for expanding the markets for recycled rubber through a complicated credits program that would ultimately lower the cost of items made with recycled rubber.

The RMA has been on top of this bill since its introduction earlier this year. The association's opposition to the bill has spawned a debate between the bill's sponsors and the RMA. A good, healthy debate that can only enhance the chances of legislation being passed that the industry can live with. It is also an opportunity for the rubber industry to educate not only congresspersons but the general public about the technology in the industry. It seems the bill's authors perceive tires as low tech items. They, like most outside of the industry, see tire manufacturing only from the production worker removing the tire from the curing press. They don't see the research, development and engineering involved in not only the tire, but all of the materials in its composition. The demands of the automakers on rubber products, especially tires, cannot be met by increasing scrap rubber usage in the product.

It's good to see Congress addressing the enormous waste problem. It's also good that Congress sees the need for providing incentives for the use of recycled rubber. But the carrot, as the bills sponsors call it, appears to be in the wrong place. We feel, as the RMA has pointed out, Congress can create incentives for scrap rubber usage in highway pavement projects or as a source for fuel, to name two. Congress could also provide incentives for research into increasing the usage of recycled rubber in rubber products.

Even though the RMA would like to see the bill scrapped entirely in favor of working with state governments, it's doubtful a scrap tire bill won't be passed. This legislation is attractive to the lawmakers. They get to act on a visible environmental issue that doesn't directly affect most of their constituents. Government initiative can be a good thing. The history of the synthetic rubber industry is a testament to that. The federal government's decision to build an interstate highway system was also a boon. But the present language in the Tire Recycling Incentives Act doesn't create new markets or address the issue of the quality of the less expensive goods. Hopefully the RMA can make this legislation not only palatable for the industry but something that would truly be an incentive.

Don R. Smith
Editor

RubberWorld

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Business Briefs

Acquisitions, expansions

Yokohama Rubber of Japan plans to increase **Mohawk Rubber's** tire capacity from 4.1 million units per year to 5.3 million by 1991, with an initial investment of \$40 million. According to the plan, Mohawk, headquartered in Akron, OH, with production facilities in Salem, VA, will produce Yokohama-brand radial tires for passenger cars and light trucks in the replacement market by the end of the year, in addition to existing production of Mohawk-brand and private brand tires. Yokohama also intends to supply OEM tires in North America, and plans to increase capacity to 10 million units per year by the mid-1990s. Total investment will reach \$200 million, and will include the addition of 100 employees by 1991.

Rubbermaid, Wooster, OH reached a definitive agreement to buy **Eldon Industries** through a stock exchange where Eldon stockholders will receive Rubbermaid stock with each Eldon share being converted. The publicly-held, Inglewood, Calif.-based company's office products segment consists of the Eldon Office Products Division, offering office accessories, and Davson Division, which markets communications boards, building directories, signage and conference room items under the Davson name. The agreement has yet to be approved by Eldon stockholders and the appropriate regulatory bodies.

Muehlstein's Rubber Division established offices in the United Kingdom, Hamburg and Milan and will establish a global headquarters in London for the Division.

RMA tire report - May
(figures in thousands of units)

Passenger tires	YTD '90	YTD '89	% change
Shipments			
original equipment	20,600	24,095	-14.5
radial	18,101	21,019	-13.9
replacement	61,240	59,577	2.8
radial	59,166	56,348	5.0
export	5,625	5,528	1.8
radial	5,347	5,115	4.5
total	87,464	89,200	-1.9
radial	82,614	82,482	0.2
Production			
radial	75,540	78,031	-3.2
radial	72,488	72,553	-0.1
Truck & bus tires			
Shipments			
original equipment	3,193	3,884	-17.8
radial	2,721	3,213	-15.3
replacement	14,392	14,011	2.7
radial	8,889	8,019	10.8
export	1,530	1,546	-1.0
radial	1,228	1,160	5.9
total	19,115	19,441	-1.7
radial	12,838	12,391	3.6
Production			
radial	16,045	16,999	-5.6
radial	11,395	11,136	2.3

Two tire testing courses, one for wet handling and one for dry handling, were added at **General Tire's** proving grounds at Uvalde, Texas, as part of a multi-million dollar expansion, allowing evaluation of tire performance on a variety of vehicles on an unlimited number of course configurations.

Allied-Signal plans to construct a \$160 million plant for the manufacture of polyester fiber used for passenger car tires, seat belts and other industrial applications in Longwy, France. When operational in 1993, it will employ about 300. **Allied-Signal** has another polyester plant in Moncure, NC.

Akron Standard moved into larger facilities to expand its tire mold and segmental mold mechanism manufacturing capabilities to three times that of the previous facility.

Arco Chemical moved its Automotive Sales and Marketing Center into expanded offices in Southfield, MI, to house its project evaluations, application development, material selection and troubleshooting services.

Du Pont, Wilmington, DE, will double capacity for dodecanedioic acid (DDDA), an intermediate for nylon, at the Victoria, TX, plant by 1993.

Witco purchased the stearates division of **B.G.R. Chemical Products** in Pointe-Claire, Quebec, Canada, for an un-

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Business Briefs

disclosed amount of cash, including manufacturing technology and equipment that will be installed at **Witco Canada's** Oakville, Ontario facility. Witco has a stearates plant due on stream in early 1991 at Houston, TX, as well as existing plants in Chicago, IL, Perth Amboy, NJ and Cuautitlan, Mexico.

UCB will increase its shareholding in the Japanese pharmaceuticals company **Choseido Seiyaku Ltd.**, at Tokushima, to 49% as part of an expansion strategy to develop activities in Japan. The company produces medical products.

Amoco Chemical will increase annual capacity for ethylene by about 600 million pounds and propylene capacity by about 200 million pounds after completion of a \$200 million expansion at its olefins production facility at the Chocolate Bayou plant near Alvin, TX, in early 1994. Current ethylene capacity is 2.4 billion pounds and propylene capacity is 800 million pounds. The increased propylene capacity will be used as feedstock for the previously announced \$90 million polypropylene unit being constructed at the same site.

Amoco Chemical will construct a 23,000 tons per year trimellitic anhydride unit at its Geel, Belgium facility. TMA is used in high-temperature wire enamels, high-

performance plastics, powder coatings and specialty high-temperature and extractable-resistant plasticizers for polyvinyl chloride. The plant will use Amoco's proprietary Mid Century oxidation process, and should be operational by early 1993. The company also has a TMA plant at Joliet, IL.

Alusuisse-Lonza's Organic Chemicals Division, through **Alusuisse of America**, acquired **Cyclo Products** and its affiliate, **Balenco Enterprises**, both located in Los Angeles, CA. The two firms manufacture fine chemical intermediates which will boost Lonza's North American share of fine chemicals. The acquisitions will also have access to the worldwide distribution network of the Alusuisse-Lonza group.

The **Association of Consulting Chemists and Chemical Engineers** established a midwest office in the Chicago area. The association supplies speakers on a broad range of topics related to the management of business and technology.

Farrel opened an office in Charlotte, NC to serve the Southeast region of Florida, Alabama, Georgia, North and South Carolina, Tennessee and Virginia. An office was opened in Kitchener, Ontario, to serve the Canadian market. Farrel supplies polymer processing machines, parts, service and technology.

Applied Color Systems, Lawrenceville, NJ, completed a 28,000 square foot, two-story building addition, housing expanded manufacturing facilities and a new technical support center.

Bohlin Reologi AB, a Swedish producer of rheological instrumentation, will move into new offices near Ideon in Lund, Sweden, to provide additional space for application laboratories, product development, courses and consultation.

The **American Society for Nondestructive Testing** moved into a 17,750 square foot headquarters building in Columbus, OH, to house additional office space, a new

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U.S. tire and tube imports
(units in thousands)

	YTD '89	YTD '90	% Chg.
Passenger radial	17,064	17,316	1.5
Passenger all other	1,356	1,445	6.6
Light truck radial	991	1,447	45.9
Light truck all other	266	185	-30.5
All other truck radial	1,693	1,811	6.9
All other truck	1,550	1,388	-10.4
Source: RMA		Figures through May	